

ARGUMENTS

The flanges of the present invention (page 5, line 14) shown in Figures 1 and 2 are provided for the connection of the sleeves to each other for securable attachment onto the monopole; in particular, in the case of a stepped monopole is known in the art as a monopole having a multiplicity of diameters in cross-sections that are greater at the base of the monopole and progressively smaller moving away from the base toward the top of the pole. Additional securement for the attached complementary hemi-sleeves is provided by the combination of a filler or snugging material that combines with the reinforcing sleeve to snugly and securely fill any gaps that may exist between the interior of the sleeves and the exterior surface or perimeter of the monopole (page 8, lines 8-12), as illustrated in Figure 2 and as set forth in the claims.

By contrast, Fournier's flanges in column 7, lines 36-37, are designed and configured to support the collar, notably wherein the "top and bottom surfaces of the mounting collar 254 extend in parallel planes, which are perpendicular to a longitudinal axis of the central sleeve 252 thereby ensuring that the intermediate tubular outer segment 138 be evenly supported relative to the bottom tubular outer segment 136." (col 7, lines 38-47). The mounting collar of Fournier is designed, constructed and configured merely for mounting luminaires to a utility pole, not for providing any reinforcement to the pole.

Claims 1-14 were rejected as being indefinite under 35 USC 112, second paragraph; in particular, the Examiner indicated that the following terms are deemed vague and indefinite: "complementary hemi-sleeves" (claim 1), "to the pole flanges of stepped monopoles" (claim 2), "the sleeves are shaped to approximate the shape of the monopole

surface” (claim 3), “sleeves are located at a predetermined, select position on the monopole for optimal reinforcement” (claim 7), “the at least one pair of complementary hemi-sleeves are multiple pairs of complementary hemi-sleeves” (claim 8), “the filler forms an integral sleeve snugging material-monopole” (claim 12), and “a mounting support incorporated into the sleeves for the mounting of appurtenances” (claim 13).

The Examiner requested clarification of the foregoing. The applicant provides the following additional remarks and explanations along with a reiteration of the initially supplied explanation, by way of clarification, with references in parentheses citing the specification as originally filed with the application. The applicant respectfully asserts that these terms as used are understood to one of ordinary skill in the art and that, should the examiner have further need for clarification, she specifically comment as to her needs so that the applicant will be able to remediate her background as necessary. As such, applicant respectfully asserts that the following, combined with the amended claims, overcomes any rejections based upon 35 USC 112, as well as substantive rejections under 102, according to the following arguments combined with the amendments.

The reinforcing complimentary hemi-sleeves 12 (page 5, line 13-14) form a reinforcing sleeve around the monopole (page 5, lines 14-15) when secured to the monopole with flanges 14 and fasteners to join the complementary hemi-sleeves, which appear as matching pairs of substantially semi-circular components that fit together to form a circular reinforcement around a monopole when viewing a top or cross-sectional view of the monopole, as illustrated in Figures 1 and 2. This description in the specification, along with the drawings, clearly discloses and describes in detail the complementary hemi-sleeves as being substantially semi-circular in cross-section so that a matching pair

of hemi-sleeves with flanges is attachable around the exterior of a monopole via fasteners that join the two sections together for the purpose of reinforcing the monopole at that attachment location. The sleeves are shaped to match and fit against the exterior of the surface of the monopole, as illustrated in Figures 1 and 2, in order to provide securement thereto by approximating the shape of the monopole outer edge or perimeter (page 5, lines 19-21). The sleeves are attachable and/or attached to a monopole at a predetermined, select position for optimal reinforcement of the monopole, based upon the location on the monopole where appurtenances are mounted thereto (page 8, lines 13-21). Where multiple appurtenances are located in different locations on the monopole, multiple pairs of complementary hemi-sleeves are used to reinforce the monopole at corresponding locations, as set forth in claim 8 and in the specification at page 8, lines 13-21. The flanges (page 5, line 14) shown in Figures 1 and 2 are provided for the connection of the sleeves to each other for securable attachment onto the monopole; a stepped monopole is known in the art as a monopole having a multiplicity of diameters in cross-sections that are greater at the base of the monopole and progressively smaller moving away from the base toward the top of the pole. Additional securement for the attached complementary hemi-sleeves is provided by the combination of a filler or snugging material that combines with the reinforcing sleeve to snugly and securely fill any gaps that may exist between the interior of the sleeves and the exterior surface or perimeter of the monopole (page 8, lines 8-12), as illustrated in Figure 2. The filler may be a neoprene gasket, as set forth in the specification at page 7, lines 13-21 and page 8, lines 3-12. Finally, a mounting support incorporated into the sleeves for the mounting of appurtenances is described (page 8, lines 13-23), in particular on page 8 at lines 21-23.

The appurtenances are attachable to the monopole indirectly by being attached to the reinforcing sleeve of the present invention, in particular where mounting supports are provided, via fasteners such as bolts; appurtenances are normally attached directly to the monopole itself (page 8, lines 19-21).

Rejection of Claims on Art Grounds in the 27 November 2002 Office Action, and Traversal Thereof

In the 27 November 2002 Office Action, claims 1-14 have been rejected on prior art grounds, under 35 U.S.C 102, as follows:

Claims 1-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Fournier (6,167,673).

Claim 1

Examiner cites Fournier as having disclosed an integrated, monopole, reinforcement sleeve system comprising at least one pair of complementary hemi-sleeves. However, Fournier in no way teaches the *reinforcement* of monopoles with complementary hemi-sleeves as claimed in the present invention. Overall, Fournier teaches an improved design structure for a complete utility pole; by contrast, the present invention is designed specifically for the reinforcement of existing designs or structures of monopoles and is attachable thereto completely on the exterior of the pole.

Thus, **Fournier does not teach a reinforcing sleeve with mounting support incorporated integrally therewith**, as the present invention specifies and clearly describes, as well as recited in the now amended claims of the present invention.

Specifically, Col 7, line 32-38 are cited as prior art describing complementary hemi-sleeves:

“FIG. 10 illustrates how an accessory, such as a luminaire 246, is assembled to the utility pole 110. The luminaire 246 includes a pair of diametrically opposed electric lights 248 supported by a structure 250 extending radially outwardly from a central sleeve 252. The sleeve 252 is formed of two semi-circular symmetrical portions adapted to be assembled together about the envelope 114 by means of bolts or the like. The symmetrical portions are provided with lateral mounting flanges (not shown) through which the bolts are inserted to retain the two symmetrical portions together.”

Specifically, Col 2, lines 14-18 are cited as prior art providing integrated monopole reinforcement:

“According to a further general aspect of the present invention, there is provided an accessory for use with a utility pole having at least one upper pole section resting on a lower pole section, said accessory comprising a sleeve portion adapted to fit snugly about an outer surface of the utility pole, and spacer means extending inwardly from an inner surface of said sleeve portion for engagement between said upper and lower pole sections.”

However, examiner’s citations from Fournier describe a sleeve mount for mounting an accessory, such as a luminaire, to a monopole. *Fournier makes no description of using such accessory mount as a reinforcement sleeve for the monopole, nor teaches the reinforcement of the monopole to lateral stresses in any way. In fact, the Fournier reference teaches away from the present invention inasmuch as it teaches a mounting sleeve, which actually creates additional stresses without providing reinforcement therefor, much less to provide reinforcement of the pole itself.* Typically, the addition of appurtenances creates additional loads and stresses on a monopole, thereby introducing weakened points that are potentially subject to failure of the pole when attachments or appurtenances such as accessories and accessory mounts are added to the monopole. *Furthermore, the accessory sleeve mount as described by Fournier must be positioned at joints in the monopole as described by Fournier to be held in place.* Attachment of

mountings to a monopole at its joints, which are typically weak points in the pole to begin with, contributes to additional weakening of the monopole at those locations, which teaches away from the present invention.

Notably, the *sleeve mount describe by Fournier in fact separates the adjacent sections of the monopole*, and thus *contribute to weakening* the monopole's ability to resist lateral stresses. The present invention, in contrast, is affixed to the monopole at any position along the monopole and without the need to insert into a joint, so as to provide the most reinforcement possible. In fact, the present invention provides the complementary hemi-sleeves and flanges for attachment for the purpose of reinforcement of the monopole without creating or causing any separation or disruption in the monopole surface; the attachment is completely external to the pole and does not penetrate the monopole surface for attachment.

Overall, Fornier teaches an improved design (structure) for a complete utility pole; by contrast, the present invention is designed specifically for the reinforcement of existing designs or structures of monopoles and is attachable thereto completely on the exterior of the pole.

Fornier teaches an integrated new pole design composed of inner structure (steel or could be aluminum) and envelope of insulated material such as fibrous cement, polymeric material, etc. The envelope helps to insulate the inner metallic structure and reduce corrosion. The envelope covers the entire length of the pole, which teaches away from the present invention. The main objective of the envelope is to insulate the inner structure and byproduct provides additional secondary load carrying capacity and corrosion

protection to the inner structure. The material used for envelope indicates that envelope can only carry relatively small load, such as an attachment to the pole.

By contrast, the reinforcing sleeves of the present invention (steel or aluminum) are *used to reinforce overstressed locations of existing poles* (steel, aluminum, concrete, or wood). The sleeves are major load-carrying elements. They can be designed to carry loads even larger than the existing structure. The sleeves are not intended for insulation or corrosion protection but mainly for strength and load-transfer.

The “sleeves” of Fournier refers to the device for mounting accessories on his integrated utility poles. The sleeves (Col. 7, lines 28-38) are used for supporting accessories not for providing any strength to the integrated pole and in fact weaken it as set forth hereinabove. By contrast, the sleeves of the present invention provide to the main reinforcing element in the design of the present invention. The sleeves are the elements that provide the strength for externally reinforcing a monopole without penetration or separation of the pole.

In summary, the two inventions are fundamentally different. Our invention deals with the real problem of upgrading existing-poles or increasing their strength (existing design applications). Fournier invention deals with the development of new utility poles that has improved features (new design application).

Therefore, Fournier in no way teaches the *reinforcement* of monopoles with complementary hemi-sleeves as the present invention does.

Examiner also cites Col 5, lines 38-47 as prior art describing use of a non-slip filler:

“As seen in FIG. 4, an elastomeric material 72 may be disposed at selected locations between the inner structure 12 and the envelope 14 for ensuring gradual and partial

transfer of loads therebetween. For instance, a neoprene foam could be injected in specific areas between the inner structure 12 and the envelope 14. Alternatively, a thick strip of a resilient polymeric material having an adhesive coating could be mounted in an axial or spiral fashion about the inner structure 12 to effect partial and controlled transfer of loads between the inner structure 12 and the envelope 14.”

As set forth in the foregoing, applicant asserts that Fournier does not teach the invention according to claim 1 and that teaching the incorporation of a non-slip filler in a telescoping utility pole does not make the present invention obvious.

Claim 2

The examiner cites col 7, lines 35-38 as teaching that the sleeves include flanges for fastening the sleeves to the pole flanges of stepped monopoles. However, examination of the cited passages does not reveal the use of flanges for fastening the sleeve to pole flanges as in the present invention, but rather the use of a mounting collar to evenly distribute the weight of and evenly support a superior segment of the monopole with respect to an inferior segment.

“A collar 254 extends inwardly from an inner circumference of the sleeve 252 for insertion at the interface or junction of the bottom and intermediate tubular outer segments 136 and 138. The top and bottom surfaces of the mounting collar 254 extend in parallel planes, which are perpendicular to a longitudinal axis of the central sleeve 252, thereby ensuring that the intermediate tubular outer segment 138 be evenly supported relative to the bottom tubular outer segment 136.”

Claim 7

Examiner cites Fournier as having described the placement of accessory sleeves at predetermined, select position on the monopole for optimal reinforcement. However, as argued for claim 1 above, the placement of accessory sleeves according to the invention

of Fournier actually weakens the monopole and placement is limited to adjacent section joints. Thus, the accessory sleeve as described by Fournier cannot be used to optimally reinforce the monopole.

Claim 8

The examiner has correctly indicated that the at least one pair of complementary hemi-sleeves are being claimed in claim 8 as multiple pairs of complementary hemi-sleeves that are attachable to a monopole in different locations along the length of the pole. No substantive argument for specific rejection of claim 8 is asserted by the Examiner; as such, applicant argues that claim 8 is allowable, either based on the arguments supporting the allowance of claim 1 or if claim 8 were rewritten in independent form including all limitations of preceding claims from which it depends.

Claims 13 and 14

The examiner cites Fournier as having described a sleeve with an incorporated mounting support.

Specifically, the examiner cites col 6, lines 4-10:

“An annular support plate 96 is welded on the outer surface of the bottom tubular inner segment 16 above the mounting plate 88 to support the envelope 14. Reinforcement plates 98 are uniformly circumferentially distributed between the annular mounting plate 88 and the reinforcement plate 98 to transfer loads therebetween. “

In this description, Fournier is teaching how a *bottom segment is designed to support a superior envelope, not a reinforcing sleeve with an incorporated mounting support*, as the present invention teaches.

And col. 7, lines 15-20:

“In this case, the respective casings of the transformers would be distributed about a central pole section (not shown) mounted between two segments of the inner structure 112. The casings could be supported on a circular platform (not shown) secured to the central pole section.”

In this prior art description, Fournier teaches a circular platform support for an accessory that is *mounted between two segments of the monopole, not a mounting support incorporated into a reinforcing sleeve*, as the present invention teaches.

Thus, Fournier does not teach a reinforcing sleeve with mounting support incorporated, for reinforcing a monopole without adding additional new lateral stresses, as the present invention specifies and clearly describes, and as is claimed in the now amended claims. As set forth in the foregoing, applicant asserts that Fournier does not teach the invention according to claim 1 from which claims 2-14 depend. As such, applicant asserts that claims 1-14 are distinguishable and in condition for allowance.

Claims 1-14, now amended, are asserted to be in patentable condition. Allowance of these claims is hereby respectfully requested. In the event that the Examiner finds additional minor modifications that would place these claims in allowable condition, the Examiner is respectfully requested to make telephonic contact with the Attorney of Record to discuss and make changes via Examiner's Amendment to place the claims in condition for allowance.

The above rejections of the claims 1-14 on the stated art and utility grounds are traversed, and consideration of the patentability of the now amended claims 1-14 is requested, in light of the foregoing remarks. Favorable action is therefore requested.

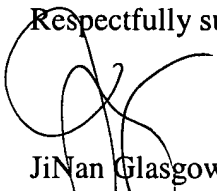
CONCLUSION

In view of the foregoing, claims 1-14 constituting the claims pending in the application, are submitted to be fully patentable and in allowable condition.

If any issues remain outstanding, incident to the allowance of the application, Examiner Simone is respectfully requested to contact the undersigned attorney at (919)-664-8222 or via email at jinang@trianglepatents.com to discuss the resolution of such issues, in order that prosecution of the application may be concluded favorably to the applicant, consistent with the applicant's making of a substantial advance in the art and particularly pointing out and distinctly claiming the subject matter that the applicant regards as the invention.

This Request for Continued Examination is submitted via US Postal Service (Express Mail) on September 16, 2003.

Respectfully submitted,



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